

**REMARKS****Status of Claims**

Claims 1-6, 8-16, 17-18, 19-24, and 26-46 are pending in the application. Claims 7 and 25 have been canceled without prejudice or disclaimer. Claims 1, 5, 8-11, 13-16, 19, 23, 26-29, and 31-32 are amended. Claims 17 and 18 have been allowed. Applicants thank the Examiner for the indication of allowable subject matter in claims 17 and 18.

**Claims 1, 6, 8, 9, 19, 24, 26-27, 37-38 and 44-45 are Allowable**

The Office has rejected claims 1, 6, 8, 9, 19, 24, 26-27, 37-38 and 44-45, at paragraphs 4-15 of the Office Action, under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent App. Pub. No. 2004/0090970 ("Sanchez"), in view of U.S. Patent App. Pub. No. 2004/0088735 ("Kristofek"). Applicants respectfully traverse the rejections.

None of the cited references, including Sanchez and Kristofek, disclose or suggest the specific combinations of claims 1 and 8. For example, neither Sanchez nor Kristofek disclose or suggest a broadcast overlay network having a ring topology to carry broadcast traffic from a head-end network, where the ring topology includes at least a first network ring and a second network ring connected via at least one cross-connect element, as recited in claims 1 and 8. Additionally, neither Sanchez nor Kristofek disclose or suggest a digital subscriber line access multiplexer (DSLAM) having a line interface and a network interface, where the network interface communicates with the broadcast overlay network via the second network ring, as recited in claims 1 and 8. In contrast to claims 1 and 8, Sanchez discloses a device that is coupled to a trunk line unit via a single SONET or SDH ring. (See Sanchez, col. 4, para. [0074]). Further, in contrast to claims 1 and 8, Kristofek discloses a leaf network in which a leaf-initiated point-to-multipoint connection is established after a join request is issued by the leaf node. (See Kristofek, para. [0029]). Thus, claims 1 and 8 are allowable.

Claim 6 depends from Claim 1. Claims 9 and 37-38 depend from Claim 8. Thus, Sanchez and Kristofek fail to disclose at least one element of claims 6, 9 and 37-38, at least by virtue of their dependency from claims 1 and 8. Accordingly, claims 6, 9 and 37-38 are allowable.

In addition, none of the cited references, including Sanchez and Kristofek, disclose or suggest the specific combinations of claims 19 and 26. For example, neither Sanchez nor Kristofek disclose or suggest receiving video content associated with a particular video channel from a video head-end at a DSLAM via a broadcast overlay network having a ring topology, where the ring topology includes at least a first network ring and a second network ring connected via at least one cross-connect element, as recited in claims 19 and 26. Additionally, neither Sanchez nor Kristofek disclose or suggest delivering the video content associated with the particular video channel from a network interface of the DSLAM in communication with the broadcast overlay network via the second network ring to the line interface, as recited in claims 19 and 26. Thus, claims 19 and 26 are allowable.

Claim 24 depends from Claim 19. Claims 27 and 44-45 depend from Claim 26. Thus, Sanchez and Kristofek fail to disclose at least one element of claims 24, 27 and 44-45, at least by virtue of their dependency from claims 19 and 26. Accordingly, claims 24, 27 and 44-45 are allowable.

**Claims 2-4, 20-22, 35-36 and 42-43 are Allowable**

The Office has rejected claims 2-4, 20-22, 35-36, and 42-43, at paragraphs 16-25 of the Office Action, under 35 USC §103(a) as being unpatentable over Sanchez in view of Kristofek, and further in view of U.S. Patent No. 6,892,233 ("Christian"). Applicants respectfully traverse the rejections.

As explained previously, Sanchez and Kristofek do not disclose or suggest the specific combinations of claims 1, 8, 19 and 26. For example, neither Sanchez nor Kristofek disclose or suggest a broadcast overlay network having a ring topology to carry

broadcast traffic from a head-end network, where the ring topology includes at least a first network ring and a second network ring connected via at least one cross-connect element. Additionally, neither Sanchez nor Kristofek disclose or suggest a digital subscriber line access multiplexer (DSLAM) having a line interface and a network interface, where the network interface communicates with the broadcast overlay network via the second network ring.

Christian does not disclose the features of claims 1, 8, 19 and 26 not disclosed by Sanchez and Kristofek. In contrast to claims 1, 8, 19 and 26, Christian discloses web-based management of SONET or SDH network elements that may reside in a single-ring SONET or SDH architecture. (*See* Christian, col. 6, ll. 52-col. 7, ll. 9; FIG. 1). Christian does not disclose or suggest a broadcast overlay network having a ring topology to carry broadcast traffic from a head-end network, where the ring topology includes at least a first network ring and a second network ring connected via at least one cross-connect element. Additionally, Christian does not disclose or suggest a digital subscriber line access multiplexer (DSLAM) having a line interface and a network interface, where the network interface communicates with the broadcast overlay network via the second network ring.

Claims 2-4 depend from Claim 1, which Applicants have shown to be allowable. In addition, claims 20-22 depend from Claim 19, which Applicants have shown to be allowable. Further, claims 35-36 depend from Claim 8, which Applicants have shown to be allowable. Additionally, claims 42-43 depend from Claim 26, which Applicants have shown to be allowable. Thus, claims 2-4, 20-22, 35-36 and 42-43 are allowable at least by virtue of their dependency from claims 1, 8, 19 and 26.

#### **Claims 5 and 23 are Allowable**

The Office has rejected claims 5 and 23, in paragraphs 26-28 of the Office Action, under 35 U.S.C. §103(a) as being unpatentable over Sanchez, Kristofek, Christian and U.S. Patent No. 6,718,553 ("Kenworthy"). Applicants respectfully traverse the rejections.

As explained previously, Sanchez, Kristofek and Christian do not disclose or suggest the specific combinations of claims 1 and 19. For example, Sanchez, Kristofek and Christian do not disclose or suggest a broadcast overlay network having a ring topology to carry broadcast traffic from a head-end network, where the ring topology includes at least a first network ring and a second network ring connected via at least one cross-connect element. Additionally, Sanchez, Kristofek and Christian do not disclose or suggest a digital subscriber line access multiplexer (DSLAM) having a line interface and a network interface, where the network interface communicates with the broadcast overlay network via the second network ring.

Kenworthy does not disclose the features of claims 1 and 19 that are not disclosed by Sanchez, Kristofek and Christian. In contrast to claims 1 and 19, Kenworthy discloses long-haul fiber optic network that may communicate with a local/metro fiber optic system via a local/metro point of presence, such as a central office. (*See* Kenworthy, col. 6, ll. 60-65; col. 7, ll. 15-19). Kenworthy does not disclose or suggest a broadcast overlay network having a ring topology to carry broadcast traffic from a head-end network, where the ring topology includes at least a first network ring and a second network ring connected via at least one cross-connect element. In particular, Kenworthy does not disclose that any of its fiber optic networks comprise a ring architecture. Additionally, Kenworthy does not disclose or suggest a digital subscriber line access multiplexer (DSLAM) having a line interface and a network interface, where the network interface communicates with the broadcast overlay network via the second network ring.

Claims 5 and 23 depend from claims 1 and 19, which Applicants have shown to be allowable. Thus, claims 5 and 23 are allowable at least by virtue of their dependency from claims 1 and 19.

In addition, the dependent claims include additional features not disclosed by the references. For example, Kenworthy does not disclose or suggest that any of its fiber optic networks comprise a ring architecture. Moreover, Kenworthy does not disclose a

first network ring and a second network ring that comprise SONET rings, where the first network ring includes an ingress ADM and the second network ring includes an egress ADM connected to the network interface of a DSLAM, as recited in claims 5 and 23. For this additional reason, claims 5 and 23 are allowable.

**Claims 10, 14, 28, 32, 39-41, and 46 are Allowable**

The Office has rejected claims 10, 14, 28, 32, 39-41 and 46, at paragraphs 29-37, under 35 U.S.C. §103(a), as being unpatentable over Sanchez in view of Kristofek, and further in view of U.S. Published Patent Application No. 2004/0117503 ("Nguyen"). Applicants respectfully traverse the rejections.

As explained previously, Sanchez and Kristofek do not disclose or suggest the specific combinations of claims 8 and 26. For example, neither Sanchez nor Kristofek disclose or suggest a broadcast overlay network having a ring topology to carry broadcast traffic from a head-end network, where the ring topology includes at least a first network ring and a second network ring connected via at least one cross-connect element. Additionally, neither Sanchez nor Kristofek disclose or suggest a digital subscriber line access multiplexer (DSLAM) having a line interface and a network interface, where the network interface communicates with the broadcast overlay network via the second network ring.

Nguyen does not disclose the features of claims 8 and 26 not disclosed by Sanchez and Kristofek. In contrast to claims 8 and 26, Nguyen discloses a method to speed channel changes by comparing, at a single network node, a MAC address obtained from a multicast join message with a MAC address of a pending multicast leave message and initiating an expedited group leave action when a match exists. (See Nguyen, para. [0010]). Nguyen does not disclose or suggest a broadcast overlay network having a ring topology to carry broadcast traffic from a head-end network, where the ring topology includes at least a first network ring and a second network ring connected via at least one cross-connect element. Additionally, Nguyen does not disclose or suggest a digital subscriber line access multiplexer (DSLAM) having a line interface and a network

interface, where the network interface communicates with the broadcast overlay network via the second network ring.

Claims 10, 14 and 39-41 depend from Claim 8, which Applicants have shown to be allowable. In addition, claims 28, 32 and 46 depend from Claim 26, which Applicants have shown to be allowable. Thus, claims 10, 14, 28, 32, 39-41 and 46 are allowable at least by virtue of their dependency from claims 8 and 26.

**Claims 11, 12, 15, 16, 29-30, and 33-34 are Allowable**

The Office has rejected claims 11, 12, 15, 16, 29-30, and 33-34, at paragraphs 38-46, under 35 U.S.C. §103(a), as being unpatentable over Sanchez in view of Kristofek, and further in view of Kenworthy. Applicants respectfully traverse the rejections.

As explained previously, Sanchez and Kristofek do not disclose or suggest the specific combinations of claims 8 and 26. For example, Sanchez and Kristofek do not disclose or suggest a broadcast overlay network having a ring topology to carry broadcast traffic from a head-end network, where the ring topology includes at least a first network ring and a second network ring connected via at least one cross-connect element. Additionally, Sanchez and Kristofek do not disclose or suggest a digital subscriber line access multiplexer (DSLAM) having a line interface and a network interface, where the network interface communicates with the broadcast overlay network via the second network ring.

Kenworthy does not disclose the features of claims 8 and 26 that are not disclosed by Sanchez and Kristofek. In contrast to claims 8 and 26, Kenworthy discloses long-haul fiber optic network that may communicate with a local/metro fiber optic system via a local/metro point of presence, such as a central office. (See Kenworthy, col. 6, ll. 60-65; col. 7, ll. 15-19). Kenworthy does not disclose or suggest a broadcast overlay network having a ring topology to carry broadcast traffic from a head-end network, where the ring topology includes at least a first network ring and a second network ring connected via at least one cross-connect element. In particular, Kenworthy does not disclose that any of

its fiber optic networks comprise a ring architecture. Additionally, Kenworthy does not disclose or suggest a digital subscriber line access multiplexer (DSLAM) having a line interface and a network interface, where the network interface communicates with the broadcast overlay network via the second network ring.

Claims 11, 12, 15 and 16 depend from Claim 8, which Applicants have shown to be allowable. Claims 29, 30 and 33-34 depend from Claim 26, which Applicants have shown to be allowable. Thus, claims 11, 12, 15, 16, 29, 30 and 33-34 are allowable at least by virtue of their dependency from claims 8 and 26.

In addition, the dependent claims include additional features not disclosed by the references. For example, Kenworthy does not disclose or suggest a DSLAM adapted to receive, from a customer premise via a line interface, a unicast request for a destination in the head-end network, and to deliver the unicast request to a dedicated data network *separate from* a broadcast overlay network *and separate from* a legacy xDSL data network, as recited in Claim 11. Moreover, Kenworthy does not disclose that the dedicated data network comprises a virtual private network (VPN), as recited in Claim 12. In contrast to claims 11 and 12, Kenworthy discloses that a VPN may be *substituted for* an Internet backbone. (See Kenworthy, col. 11, ll. 22-25). For this additional reason, claims 11, 12, 29 and 30 are allowable.

#### **Claims 13 and 31 are Allowable**

The Office has rejected claims 13 and 31, at paragraphs 47-49 of the Office Action, under 35 USC §103(a) as being unpatentable over Sanchez in view of Kristofek and Kenworthy, and further in view of U.S. Patent No. 6,118,780 ("Dunn"). Applicants respectfully traverse the rejections.

As explained previously, Sanchez and Kristofek do not disclose or suggest the specific combinations of claims 8 and 26. Further, Kenworthy does not disclose the features of claims 8 and 26 that are not disclosed by Sanchez and Kristofek. Moreover, Dunn does not disclose the features of claims 8 and 26 that are not disclosed by Sanchez,

Kristofek and Kenworthy. For example, Dunn does not disclose or suggest a broadcast overlay network having a ring topology to carry broadcast traffic from a head-end network, where the ring topology includes at least a first network ring and a second network ring connected via at least one cross-connect element. Additionally, Dunn does not disclose or suggest a digital subscriber line access multiplexer (DSLAM) having a line interface and a network interface, where the network interface communicates with the broadcast overlay network via the second network ring.

Claims 13 and 31 depend from claims 8 and 26, which Applicants have shown to be allowable. Thus, claims 13 and 31 are allowable at least by virtue of their dependency from claims 8 and 26.

In addition, the dependent claims include additional features not disclosed by the references. For example, Dunn does not disclose or suggest a DSLAM adapted to receive, from a customer premise via a line interface, a unicast request for a destination in a head-end network, and to *deliver the unicast request* to one of a legacy xDSL data network and a dedicated data network based on a policy decision, where the dedicated data network is separate from the broadcast overlay network and the legacy xDSL data network, as recited in claims 13 and 31. In contrast to claims 13 and 31, Dunn discloses that a client server interface at a Telco central office may contain stored instructions for *the transfer of voice or data* in accordance with the policies of the local telephone company. (See Dunn, col. 4, ll. 24-28). For this additional reason, claims 13 and 31 are allowable.

### CONCLUSION

Applicants have pointed out specific features of the claims not disclosed, suggested, or rendered obvious by the references applied in the Office Action. Accordingly, Applicants respectfully request reconsideration and withdrawal of each of the objections and rejections, as well as an indication of the allowability of each of the pending claims.

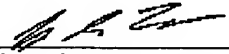


Any changes to the claims in this amendment, which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

The Examiner is invited to contact the undersigned attorney at the telephone number listed below if such a call would in any way facilitate allowance of this application. The Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 50-2469.

Respectfully submitted,

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